

CEOS IDN NEWSLETTER

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Paul Kopp from CNES to head the Technology and Services Subgroup

By Lola Olsen, IDN Task Team Lead



Centre National d'Etudes Spatiales (CNES) representative, Mr. Paul Kopp, a long-standing member and valuable contributor to the Committee on Earth Observation Satellites' (CEOS) Working Group on Information

Systems and Services (WGISS) will begin his chairmanship of the Technology and Services subgroup at the upcoming meeting in Cordoba, Argen-

entina. He follows Mr. Wyn Cudlip, representing the British National Space Centre (BNSC), who served since the formation of the subgroup. Mr. Dingsheng Liu of the National Remote Sensing Center of China (NSRCC), will serve as Vice-Chair.

Always fully engaged in the subgroup discussions, Paul has offered thoughtful feedback through the years on the full range of WGISS activities and is well-positioned to guide this subgroup. We welcome him and wish him well during his tenure.

New IDN Representative from CONAE

By Lola Olsen, IDN Task Team Lead

Mr. Marcelo Colazo will serve as the new IDN representative from the Comision Nacional de Actividades Espaciales (CONAE). Marcelo was last actively involved in the IDN about five years ago when MD7 was released. He plans to install the latest version of the software, MD9.3. Mr. Colazo currently serves as manager of the Cordoba Ground Station and is therefore a knowledgeable source of information on the Cordoba region where the meetings will be held. We are fortunate to remain in communication with Mr. Hugo Marraco, who served as the primary representative from CONAE for the IDN for more than a decade.

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PORTAL DEVELOPED FOR THE GLOBAL ENERGY AND WATER CYCLE EXPERIMENT'S (GEWEX) COORDINATED ENHANCED OBSERVING PERIOD (CEOP)

By Kengo Aizawa and Osamu Ochiai, JAXA

The Coordinated Enhanced Observing Period (CEOP) was conceived and implemented within the Global Energy and Water Cycle Experiment (GEWEX) of the World Climate Research Programme (WCRP). The implementation of CEOP required close and strong co-operation across other projects and related activities within the WCRP: in particular, the Climate Variability and Predictability (CLIVAR) study, the emerging Climate and Cryosphere (CliC) project, and the Joint World Meteorology Organization (WMO) Commission for Atmospheric Sciences/Joint Scientific Committee WCRP Working Group on Numerical Experimentation (WGNE). CEOP has been endorsed by the Integrated Global Observing Strategy Partnership (IGOS-P) as the first element of the IGOS Water Cycle Theme.

The Committee on Earth Observation Satellites (CEOS) agencies use their best efforts to contribute to CEOP and in particular, to cooperate with the CEOP satellite data integration and the field campaigns at reference sites. The goals of CEOP are to more accurately determine the association of the water cycle with climate variability and change, as well as to collect baseline data on the impacts of this variability on water resources.



(1) A new generation of remote sensing satellites (including TERRA, AQUA, ENVISAT and ADEOS-II), in addition to TRMM, Landsat-7, NOAA-K series and other operational satellites to be operated by the space agencies during the next several years. It is expected that there will be major contributions to comprehensive and quantitative monitoring of the energy and water cycle from local to global scales. Data collected will be available to provide an unprecedented enhancement of observing capabilities to infer critical atmospheric, surface, hydrological and oceanographic parameters.

(2) Experience gained in the utilization of data from operational satellites. This experience provides a long-term perspective and allows the efficient exploitation of information from new satellites.

(3) Numerical weather prediction centers (NCEP, ECMWF, JMA, NASA). These centers have made impressive gains in reanalysis and data assimilation techniques and are continually devising means for assimilating new datasets.

Efforts related to the monsoon system under CLIVAR are planned to interact with the GEWEX Hydrometeorology Panel (GHP) to focus on monsoonal circulations in the:

- Asian/Australian region through GAME and JASMINE
- American monsoons through GCIP, LBA and VAMOS
- African monsoons through CATCH.

CliC cold region hydrologic efforts will work jointly with GHP to address higher latitude land-based climate processes.

As the CEOP team prepares the CEOP system as a first prototype for Global Earth Observation Systems (GEOSS), CEOP members realize metadata is very important and a strong effort is needed to create them. The CEOP project handles various kinds of data and simultaneously faces data discovery problems related to where they are located. Taking the first step to solve the problem, the CEOP team collaborated with the IDN.

Thanks to the IDN/GCMD team's effort, the CEOP team established the 'IDN CEOP portal'. This portal makes CEOP people happy because discovering the data locations is very easy. CEOP members started to create DIFs and will register them in the near future.

<http://gcmd.nasa.gov/KeywordSearch/Home.do?Portal=ceop&MetadataType=0>

Preparing for Your Travel to Argentina

By Celia E. Izquierdo, CDA, Manager

The City of Buenos Aires, 34° 36' latitude and 58° 26' longitude extends on a plain of 202 square kilometers (78.3 sq miles). Approximately 3 million people live in this city. Including the metropolitan area, the total population of Buenos Aires is above ten million, making it one of the 10 most populated urban centers in the world. In summer (now), the weather is hot and humid. Mornings are warm and during midday and the first hours of the afternoon, the temperature rises. At night, temperatures drop slightly, so people may wear light clothes; coats are not needed. Rains are more frequent in autumn and spring (from late March to June and from late September to December, respectively).

Buenos Aires City, in early March, is hot and humid: 15/20 °C at morning and 28/32+ °C at

noon. Cordoba lies in a valley surrounded by mountains and is a historical, colonial, and touristic city. You may wish to visit Villa Carlos Paz-San Roque Lake for a short time or any small locality (perhaps La Cumbrecita), where they have very beautiful mountainous scenery. The Region of the Sierras is peppered with small mountains crossed by plentiful rivers, and artificial lakes. It possesses a great tourist potential reflected in a number of cities and tourist villages. Adventure tourism, swimming, and water sports are the main activities that appeal to visitors.

To learn more about Cordoba, please visit:
<http://www.argentinaturistica.com/informa/corifotos.htm>

JCADM

By Tom Northcutt, IDN Systems Administrator

The 8th meeting of the Joint Committee on Antarctic Data Management (JCADM) was held in conjunction with the Scientific Committee on Antarctic Research (SCAR) Open Science Conference in Bremen, Germany in late July 2004. Sharing knowledge among JCADM members and other Antarctic data managers was beneficial, and many SCAR members became better acquainted with the goals of JCADM and the Antarctic Master Directory during the presentations. The poster session allowed SCAR members to interact informally with JCADM members and discuss accomplishments and direction with individual National Antarctic Data Center (NADC) representatives. Strong support of the Antarctic Master Directory (AMD) portal system was expressed, and it was recom-

mended that all NADCs establish portals. The new docBuilder tool was demonstrated, with several useful recommendations provided by the JCADM members to improve the tool (JCADM members have significant expertise with the previous tool). Technological approaches and standards were discussed, including ISO/OGC protocols, harvesting approaches, distributed search methods, and web service/map service technologies. Community relationships with other data management organizations were fostered during the meeting, and collaborative efforts are planned for the future. The meeting was another success, as JCADM becomes more widely recognized in the Antarctic community.

American Coordinating Node Announces Release of Version 9 Software (MD9)

By Monica Holland, IDN, Web Site Developer

The American Coordinating Node of the CEOS IDN is pleased to announce the release of Version 9 software (MD9). The directory now holds more than 16,000 descriptions of Earth and environmental science data, with information on how to obtain the data and/or direct links to data sources.

MD9 software incorporates ISO changes approved through the CEOS Interoperability Forum and suggestions from usability testing. This latest version now offers new and improved search capabilities, navigational features, and an enhanced subscription service. Among the many new features of the IDN's MD9 software release is the ability for organizations to modify their portal interface with new customizable navigational features (e.g., menu items on portal home page).

For further background information on new and improved MD9 features see:
http://gcmd.nasa.gov/Aboutus/software_docs/release_announcement.html

What's New Behind the Subscription Service

By Jason Divock, IDN, Software Developer

One of the new features packaged with the MD9 release of the directory is a retooled subscription service. While it may appear similar to users on the surface, the supporting code has been rewritten to decrease maintenance and increase flexibility.

The original subscription service, written in Perl, used locations and topics that were hard-coded on the web page. This led to selections that were sometimes outdated or inaccurate. The new subscription service is coded using Jakarta Struts, which allow selections to be dynamically pulled from the database tables, assuring that accurate options are always displayed. If the name of a location or topic changes, subscriptions remain viable because they are mapped to a stable ID number and not to a name. In addition, the code is easier to maintain and extend.

Previously, changes to the structure of tables in the database would have meant a complete overhaul of the previous subscription service. Now, it is merely a matter of modifying the data level classes and leaving the remaining code untouched. This service also permits the addition of new types of subscriptions such as those to keywords and data centers with much less work because the control structure is already in place.

Now, users should see an expanded subscription service with more options and features.

Prototype Mapserver Demonstrated Through IDN

By Tyler Stevens, IDN, GIS Coordinator

The American Coordinating Node now hosts a prototype mapserver using ESRI's ArcIMS software. The mapserver enables users to access, visualize, and analyze selected vector and raster GIS data sets. Users can access the mapserver directly from the data set description through the Related_URL field. The "early" prototype GIS "portal" was created to demonstrate NASA's GIS related metadata.

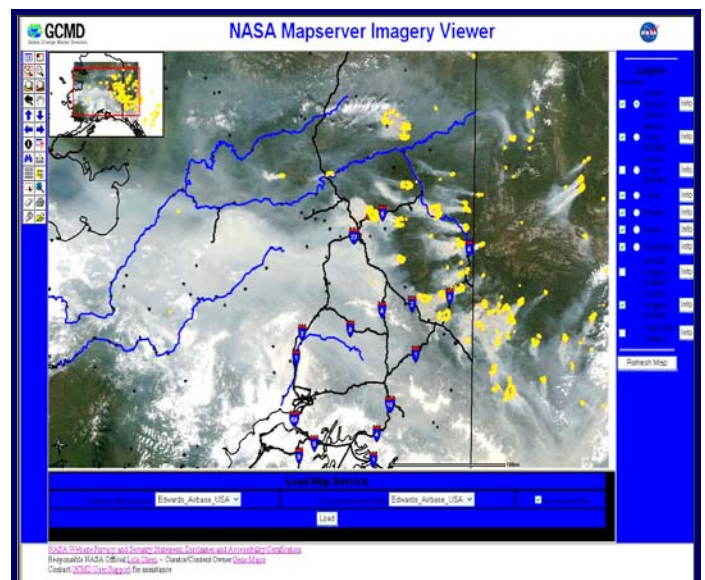
(http://gcmd.nasa.gov/KeywordSearch/Home.do?Portal=nasa_gis&MetadataType=0)

The mapserver was demonstrated at the ESRI International User Conference on August 8, 2004 in San Diego, California. The focus of the demonstration was to show the value of integrating NASA imagery within a Geographic Information System (GIS). The demonstration illustrated the integration of scenes from NASA's MODIS imagery with surface data showing erupting fires from June 2004 in Alaska and their distance from a NASA satellite receiving station. This demo was conducted in collaboration with the NASA/GSFC MODIS Rapid Response Team (<http://rapidfire.sci.gsfc.nasa.gov/>).

The current version allows users to select from a limited selection of map services available, including Alaska fire imagery and MODIS snow cover. Imagery provided in geoTIFF format was converted from original MODIS Hierarchical Data Format (HDF). Users can query and retrieve attribute data

from the map, conduct measurement and buffer analysis, and print custom maps.

Future enhancements of the mapserver include integrating The Open Geospatial Consortium's (OGC) Web Map Service (WMS) specifications (<http://www.opengeospatial.org/>); developing a routine to convert additional HDF files into geoTIFF images that can be accessed through the map server; and integrating the mapserver into the existing GCMD/IDN interface.



For more information on the mapserver demonstration use the websites at:

<http://mapserver.gsfc.nasa.gov/>

<http://mapserver.gsfc.nasa.gov/website/htmlviewer/Mapserver/viewer.htm>

The Inter-American Biodiversity Information Network

By Alvaro Espinel, I.A.B.I.N consultant,

*Richard Huber, Principal Environmental Specialist, Sustainable Development and Environment, (OAS);
Cheryl Solomon, USGS/BRD Biological and Ecosystems Coordinator*



In response to the importance that the Americas have for biodiversity protection (the Americas have 8 of the 25 biodiversity hotspots), the Inter-American Biodiversity Information Network (IABIN) was officially mandated at the Summit of the Americas on Sustainable Development, convened by the Organization of American States in Santa Cruz de la Sierra, Bolivia, in December 1996.

IABIN is an Internet-based forum for technical and scientific cooperation that seeks to promote greater coordination among Western Hemisphere countries in the collection, sharing, and use of biodiversity information relevant to decision-making and education. The objective of IABIN is to promote sustainable development and the conservation and sustainable use of biological diversity in the Americas through better management of biological information. IABIN plays the role of facilitator of the Biodiversity Information Network for the American Hemisphere. The IABIN Initiative is managed by the Unit for Sustainable Development and Environment of the General Secretariat of the Organization of American States (GS/OAS/USDE), the Project's Executing Agency, and the support of the National Biodiversity Information Infrastructure of the USGS.

While IABIN is envisioned as a distributed system of data providers in which the data are maintained

and controlled by the provider, a single point of access to the integrated resources of the network is a key component of IABIN. A key strategy to develop the information network is the selection and adaptation of information standards, to guarantee a “lingua franca” and the interoperability of the datasets dispersed in the world.

Since IABIN's inception in 1996, 34 countries have designated official IABIN Focal Points. Within each country, the IABIN Focal Points represent the interests of the country in terms of biological informatics. These representatives are expected to be in contact with their constituents, which include government ministries, museums, universities, NGOs, etc.

Three IABIN Council meetings have been held with the IABIN Focal Points and a broad representation from the international, NGO, and private sector communities. The IABIN Executive Committee (IEC) is comprised of representatives from 8 Countries and an IGO/NGO member, currently the Global Biodiversity Information Facility (GBIF).

IABIN has a five year \$35 million Project Implementation Plan. The Global Environment Facility (GEF) contributed \$6 million, and agreements with the primary biodiversity informatics institutions throughout the Americas generated co-financing of \$28.9 million from 76 regional or national institutions and programs.

The 4th IABIN Council Meeting will be held in Panama from April 6-8, 2005. All interested institutions and NGOs are invited to attend. Substantive work will be done during this meeting to bring the 34 Countries of the Americas to update the six thematic networks of IABIN, species, specimens, ecosystems, pollinators, protected areas, and invasive species and the IABIN metadata catalogue.

Alvaro Espinel (aespinel@ecosynapsis.net) **Richard Huber** (rhuber@oas.org)
Cheryl Solomon (Solomon@gcmd.nasa.gov) *This article is to be continued in the next issue.*

Viewpoint from EL CENTRO DE DATOS ANTARTICOS DE ARGENTINA

By Celia E. Izquierdo, CDA, Manager

El año 2000 fue establecido el Centro de Datos Antárticos de Argentina (CDA) dependiente de la Dirección Nacional del Antártico-Instituto Antártico Argentino, siendo el mismo miembro del JCADM. Ha sido fundamental el aporte del AMD (Antarctic Master Directory, alojado y mantenido por el GCMD) para el establecimiento del Portal del CDA, que permite la difusión de su metadata y las útiles herramientas necesarias para su redacción y actualización. El CDA estima que sería importante difundir a los investigadores de cada país (a través de los Centros de Datos Nacionales) un informativo bimestral o trimestral del AMD, sobre los nuevos DIF incorporados enviados los NADCs. Otro tema que resulta potencialmente interesante para la comunidad científica sería contar en el AMD con un lugar para la difusión de eventos científicos auspiciados por los países miembros del JCADM y sus NADCs. Asimismo, dado que no solo se espera la consulta al AMD por parte de los investigadores, sino que puede contarse con la eventual visita de navegantes de la red, la incorporación en los distintos DIF de un resumen bilingüe inglés-idioma de origen (del país que genera el DIF), permitiría el conocimiento de las investigaciones antárticas para el público en general y en especial a estudiantes de niveles intermedios (primario-secundario). Esta eventualidad se presenta como altamente probable, por ejemplo, en aquellos estudiantes jóvenes que navegando por Internet buscando información a través de una palabra clave (vg.dinosaurio) por medio de los buscadores como Google, Yahoo, etc, pueden encontrarse ante la presencia de un DIF que los interese o refiera a mayor información por vía de los distintos contactos o datos existentes en registro.

In 2000 the Centro de Datos Antarticos de Argentina (CDA) was established, an organization dependent on the Dirección Nacional del Antártico- Instituto Antártico Argentino, being the same member of JCADM. The contribution of the AMD (Antarctic Master Directory) has been fundamental for the establishment of the CDA Portal, which permits the distribution of its metadata and the necessary tools for its editing and updating.

The CDA considers it important to distribute (through the national data centers (NADCs)) to investigators of each of the countries participating in AMD, informative bimonthly or quarterly reports on the new DIFs sent to the NADCs.

Another outcome that could be potentially interesting to the scientific community would be to count on the AMD as a place for the distribution of scientific events promoted by the member countries of JCADM and their NADCs.

It should be kept in mind that investigators are not the only ones consulting the AMD website. Navigators of the Internet will also visit. The incorporation in each DIF of a bilingual summary comprised of English and the language of origin from the country that creates the DIF, would convey knowledge of the Antarctic investigations to the general public, and especially to students of intermediate levels (primary-high school). It appears highly probable, for instance, that those young students who surf the Internet looking for information by means of a key word (i.e. dinosaur) using search engines such as Google, Yahoo, etc; can find a DIF which is of interest to them or that points them to further information by means of various contacts or of existing data in the registry.

GODAE: A Global Ocean Observing System

By Melanie Meaux, IDN, Ocean Sciences Coordinator



In response to the increasing demand for an efficient, comprehensive, integrated observing system for monitoring the global ocean, the American coordinating node is collaborating with the Global Data Assimilation Experiment (GODAE) to ensure the long-term discovery, access, and exchange of global ocean products, state-of-the art ocean models and assimilation products. The GODAE concept initially emerged in early 1997 from discussions between the Ocean Observation Panel for Climate (OOPC) and the Committee on Earth Observing Satellites (CEOS) under the framework of Integrated Global Observing Strategy (IGOS) partnership. The vision is:

"A global system of observations, communications, modeling and assimilation, that will deliver regular, [near-real-time] comprehensive information on the state of the oceans [temperature, salinity and velocity structures of the ocean in support of operational oceanography, seasonal-to-decadal climate forecasts and analyses], in a way that will promote and engender wide utility and availability of this resource for maximum benefit to the community."

With the end of the operational demonstration phase (2003-2005) approaching, an increasing new generation of ocean products (in-situ and remote sensing data) and forecasts, ranging from regional and global short-range forecasts to high-resolution estimates of ocean climate are now available to the public.

These ocean data sets can be accessed through the US GODAE Monterey Server (<http://www.usgodae.org/>), and through the European GODAE MERSEA products web-site (<http://strand1.mersea.eu.org/html/strand1/welcome.html>). The directory staff is working with these organizations to host the metadata from all GODAE participants. A US GODAE portal is expected to eventually be put into place in 2005, which will hold all US data listings, adding to the 4,000 ocean data sets already existing in the IDN.

To further facilitate the visibility and sharing of ocean in-situ, remote sensing and modeling data, the IDN is developing and implementing new instrument/platform, location, and science keywords. New metadata fields will be presented to the CEOS IDN to ease the search for near real-time, numerical model data products in the coming year. Some of these additional fields would be based on previous INTEROP discussions. The IDN plans to work with groups, such as the Global Organization for Earth System Science Portal (GO-ESSP) to discuss numerical model metadata fields. These initiatives will contribute to the large scope implementation of a global integrated observing system, preserving the long-term discovery and access of observational data and assimilation products.

Welcome Melanie

We welcome Melanie Meaux, the IDN's new ocean science coordinator. She recently received her M.S. degree in Physical Oceanography/Marine Meteorology from the University of North Carolina at Chapel Hill. Her graduate work focused on marine coastal meteorology as part of the COAST (Coastal Ocean Advances in Shelf Transport) project to improve understanding of wind-driven oceanic transport processes and their effects on biological primary productivity during summer upwelling conditions. She has "hit the ground running", connecting with representatives of ocean-related projects such as the Global Ocean Data Assimilation Experiment (GODAE) project, DODS/OPeNDAP, Physical Oceanography DAAC at NASA/JPL, NOAA/National Ocean Data Center (NODC), and the Global Observing System Information Center (GOSIC). Melanie is a native of France and became a US citizen in 2002.

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IDN Task Team Meeting Agenda (March 2005)



Agenda for IDN Meeting at Cordoba, Argentina

- Introduction by Lola Olsen
Review of Minutes in Beijing, Viktor Pusztai
- Introduce the new keyword interface
Demonstrate new features and receive comments
 - o New Earth science and services controlled search interface for easier navigation through hierarchical keyword lists.
 - o New refinement boxes with multiple capabilities.
- Present the new free-text search interface
Review Lucene back-end server
- Update on docBUILDER
- Present the new customized portal interface using Java Server Pages (JSP).
- Node reports
- New keywords since last IDN meeting
- Prioritize Future Plans for IDN
Seeking input from Task Team

*Did You
Know*

***Buenos Aires Means "Good Airs"
By Professor Juan Carlos Jusem***

"Buenos Aires" means "Good Airs", but it has nothing to do with climate. The name remembers the Virgin Santa Maria della Buona Aria (St Mary of Good Air), patron of Sardinia Island. Precisely on this island, the Buenos Aires founder was born.